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EX PARTE OR LATE FILED

April 26, 1996

EX PARTE

Mr. William Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

DOCKET FILE COPY ORIGINAL

Dear Mr. Caton:

RE: CS Docket 96-46, Implementation of Section 302 of the Telecommunications Act of 1996, Open Video Systems

Bell Atlantic is filing this written ex parte on behalf of the Joint Parties<sup>1</sup> to transmit additional data regarding the above-captioned proceeding. The attached affidavit from William E. Taylor rebuts the cross-subsidization arguments raised by NCTA and others in comments filed in the Open Video System proceeding.

Please include this filing as part of the public record in the above-captioned proceeding. Please call me if you have any questions regarding this filing.

Sincerely,

*Marie Breslin (rm)*

Attachment

cc: L. Belvin  
J. Casserly  
R. Chessen  
J. Chorney  
D. Gonzalez  
M. Jones  
R. Keeney

G. Laden  
M. McManus  
J. Nakahata  
M. O'Connell  
R. Pepper  
S. Toller  
L. Walke

<sup>1</sup> The Joint Parties consist of Bell Atlantic Telephone Companies and Bell Atlantic Video Services Company; BellSouth Corporation and BellSouth Telecommunications; GTE Service Corporation and its affiliated domestic telephone operating companies and GTE Media Ventures, Inc.; Lincoln Telephone and Telegraph Company; Pacific Bell; SBC Communications Inc. and Southwestern Bell Telephone Company.

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**AFFIDAVIT OF WILLIAM E. TAYLOR**

**Before the Federal Communications Commission**

**CS Docket No. 96-46**

**April 26, 1996**

# **AFFIDAVIT OF WILLIAM E. TAYLOR**

## **I. INTRODUCTION AND SUMMARY.**

My name is William E. Taylor. I am Senior Vice President of National Economic Research Associates, Inc. (NERA), head of its telecommunications economics practice and head of its Cambridge office. My business address is One Main Street, Cambridge, Massachusetts 02142.

I have been an economist for over twenty years. I received a B.A. degree in economics (Magna Cum Laude) from Harvard College in 1968, a master's degree in statistics from the University of California at Berkeley in 1970, and a Ph.D. in Economics from Berkeley in 1974, specializing in industrial organization and econometrics. I have taught and published research in the areas of microeconomics, theoretical and applied econometrics, and telecommunications policy at academic institutions (including the economics departments of Cornell University, the Catholic University of Louvain in Belgium, and the Massachusetts Institute of Technology) and at research organizations in the telecommunications industry (including Bell Laboratories and Bell Communications Research, Inc.). I have participated in telecommunications regulatory proceedings before state public service commissions and the Federal Communications Commission (FCC) concerning competition, incentive regulation, price cap regulation, productivity, access charges, pricing for economic efficiency, and cost allocation methods for joint supply of video, voice and data services on broadband networks. I attach a copy of my curriculum vitae as Appendix A to this declaration.

I have prepared this declaration at the request of the Joint Parties<sup>1</sup> to appraise certain economic issues raised in the FCC's proceeding on Open Video Systems (OVS)<sup>2</sup> and to respond to the assertions of other parties. In particular, I address the claim of the National Cable Television Association (NCTA) that the threat of cross-subsidization requires additional safeguards in the form of particular cost allocation procedures and a separate subsidiary requirement. In my view, the existing safeguards—including price cap regulations and Part 64 cost allocation procedures—are sufficient to ensure that local exchange carriers (LECs) do not engage in cross-subsidization.

## **II. ECONOMIC PRINCIPLES FOR COMPETITIVE SERVICES, INCLUDING OPEN VIDEO SYSTEMS.**

### **A. Market forces are superior to regulation**

Competition leads to a number of good economic outcomes, including just and reasonable prices, suitable levels of service quality, an efficient use of scarce resources, the proper rate of technical progress, and an adequate incentive to implement and market new products and services. I believe that society's resources will be spent most efficiently when consumers and producers make decisions based on prices determined by the process of competition. From an economist's perspective, regulation should imitate the process of competition in those markets where competition is not present. The essential role of government intervention—or regulation—is to establish incentives for the regulated firm so that it will be led—following its own self-interest—to behave in the same manner as a firm in unregulated (competitive) markets.

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<sup>1</sup> Bell Atlantic, BellSouth, GTE, Lincoln Telephone, Pacific Bell, and SBC Communications.

<sup>2</sup> Implementation of Section 302 of the Telecommunications Act of 1996 Open Video Systems, Notice of Proposed Rulemaking, CS Docket No. 96-46 (released March 11, 1996). (OVS NPRM)

The FCC shares this perspective, recognizing its regulatory obligations in the OVS market to

promote Congress' goals of flexible market entry, enhanced competition, streamlined regulation, diversity of programming choices, investment in infrastructure and technology, and increased consumer choice...[while] requiring [LECs] to provide just, reasonable and non-discriminatory rates, terms and conditions.<sup>3</sup>

while acknowledging that

[u]ltimately, the 1996 Act recognizes that vigorously competitive markets, not regulation, are the best way to serve consumers' interests.<sup>4</sup>

The recent experience with video dialtone (VDT) regulation shows clearly the pitfalls of relying on regulation rather than market forces. After nine years of regulatory oversight—including Section 214 notification, cost, demand and revenue estimation, detailed cost allocation reporting and tariff filings, suspensions and reviews—one commercial VDT system is currently providing service to about 1250 customers. The FCC's intention that VDT common carriage provide facilities-based competition to cable television systems has been effectively frustrated by the incumbent monopolists' abuse of the regulatory system.

As noted by MFS, it is imperative that competitive forces, rather than increased regulatory oversight, dictate the outcome in OVS.

To construct specific rules and regulations regarding rates, terms, and conditions which will be appropriate for all of the contractual arrangements which might be developed by OVS operators is an impossible task. Any attempt to do so, especially in the case of non-dominant carriers, would necessarily circumscribe the development of new products and services, and consequently would have precisely the result which the Commission, and now the Congress, have sought to avoid -- marketplace development dictated by the predictions of regulators, and not driven by the market itself. Instead, therefore, the Commission should

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<sup>3</sup> OVS NPRM at ¶4.

<sup>4</sup> OVS NPRM at ¶2.

permit '[m]arket forces, together with [its] power to intervene in appropriate cases,' either on its own motion (should it believe that the market in general is not working as expected) or in response to specific complaints, to be the principle under which the Commission permits the market to develop.<sup>5</sup>

I concur with—and economic theory supports—this principle that competition better protects consumers' interests than even well-intentioned regulation, particularly when the regulatory process can be subverted by incumbents or entrants to enhance their competitive positions.

### **B. The economic definition of cross-subsidy**

Dr. Leland Johnson, on behalf of the NCTA, raises concerns of cross-subsidization between telephony and OVS services and argues for preventive measures, or safeguards, that he claims will reduce or eliminate the risk of those cross-subsidies. In particular, he states that

[t]he danger of cross-subsidization exists regardless of the form in which the LEC seeks to enter the video market...the LEC may be severely tempted to underprice its competitive video offerings at the expense of its monopoly basic telephone ratepayers, most notably residential and small business customers. Establishment of safeguards against this threat is all the more pressing in light of the stricture in the 1996 Act: "A telecommunications carrier may not use services that are not competitive to subsidize services that are subject to competition."<sup>6</sup>

To reduce the risk of confusion, it is important to understand at the outset what cross-subsidization in economic theory is and is not.

In economic theory, a service receives a subsidy if the additional revenue produced by provision of the service fails to cover the additional costs caused by supplying the service (or, equivalently, the costs that would be saved if the service were discontinued in its entirety). OVS services will not be subsidized as long as the additional revenues from the anticipated

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<sup>5</sup> Comments of MFS Communications Company, Inc. in CS Docket No. 96-46 at 12-13.

<sup>6</sup> Declaration of Leland Johnson at 2 (Johnson Declaration).

OVS services are more than sufficient to compensate the LEC offering such services for the additional costs directly attributable to the provision of those services.

This economic definition and measurement of cross-subsidy in terms of incremental cost and incremental revenue is motivated by both efficiency and fairness concerns. Because prices are based on forward-looking economic incremental costs, they foster allocative and technical efficiency.<sup>7</sup> Because incremental revenue equals or exceeds incremental cost, OVS pricing fosters fairness across customers and across competitors: OVS services will provide a positive flow of contribution, so that the firm's decision to supply the service will not unfairly disadvantage either customers of any other LEC service or competitors for OVS service.

The focus on added revenues and costs is correct from an economic perspective because, interpreted properly, the requirement that added revenues exceed added costs for a project or a service is precisely the economic requirement that the project or service not receive a subsidy. This test for cross-subsidy measures the consequences of providing or not providing OVS. Thus the costs used in this test must include all costs which change when the firm decides to provide the service, and costs which do not change when the firm decides to produce the service must not be included in this calculation. While it is certainly true that a multiproduct firm must, in the aggregate, set prices above incremental cost in order to cover the total costs of the firm, the correct test for cross-subsidy includes no allocations of costs that are shared with other services—joint and common costs. Existing regulations provide multiple safeguards to assure no cross-subsidy can or will take place.

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<sup>7</sup> Technical (or first-order) economic efficiency measures the value of the resources expended to produce goods and services. If prices are set at incremental cost, only low cost firms will be able to serve the market, and the costs of production will be as small as possible. Allocative efficiency is measured by the over-consumption (or under-consumption) of a service when its price is below (or above) incremental cost. For example, when a service is priced below incremental cost, some customers are induced to purchase service which they value less than the cost society incurs to provide it.

### **III. PRICE CAP REGULATION PROVIDES AN ADEQUATE SAFEGUARD AGAINST CROSS-SUBSIDIZATION OF OVS WITH TELEPHONY SERVICES.**

As the FCC has recognized,<sup>8</sup> the principal cross-subsidy protection is price cap regulation of common carrier services. The FCC and state commissions have increasingly adopted incentive regulatory schemes to provide regulated telephone companies with stronger incentives to improve their efficiency and to engage in innovation than have been provided under traditional cost-plus regulation. An additional motivating consideration, however, has been that such incentive schemes further attenuate any possibility that regulated LECs could recover from their customers of regulated services any losses on competitive services. Pure price cap regulation, which eliminates sharing and backstop mechanisms, has been adopted by the FCC<sup>9</sup> and more than 15 state commissions. In this pure form, price cap regulation denies regulated companies any entitlement or ability to recover from customers of regulated telephone service any reductions in earnings resulting from the prices set for non-common carrier services, such as OVS.

Dr. Johnson asserts that "...price caps are not an adequate safeguard against cross-subsidization..."<sup>10</sup> and that "by no stretch of the imagination can these price cap regimes [state and federal] be regarded as decoupling prices from costs."<sup>11</sup> According to Dr. Johnson, the remaining indirect links between prices and costs under price cap regulation are (i) the sharing mechanism option,<sup>12</sup> and (ii) the updates to the X-factor or the price cap index performed

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<sup>8</sup> Telephone Company-Cable Television Cross-Ownership Rules, Sections 63.54-63.5 and Amendments of Parts 32, 36, 61, 64, and 69 of the Commission's Rules to Establish and Implement Regulatory Procedures for Video Dialtone Service, Memorandum Opinion and Order on Reconsideration and Third Further Notice of Proposed Rulemaking, CC Docket No. 87-266, 10 FCC Rcd 244, 323 (1994).

<sup>9</sup> For those companies choosing the 5.3% productivity offset. In the price cap filings made earlier this month, the only Regional Bell Operating Company not to select the pure price cap option is US WEST.

<sup>10</sup> Johnson Declaration at 10.

<sup>11</sup> Johnson Declaration at 7.

<sup>12</sup> Johnson Declaration at 6-7.



between price cap plan periods.<sup>13</sup> However, these vestigial links between costs and prices do not give LECs an incentive to undertake a possibly unprofitable investment in OVS service because they believe that they can recover lost profits from their less-competitive telephone services. As a result, despite the remaining links between costs and prices in practice, price cap regulation<sup>14</sup> will nonetheless protect telephony subscribers.

First, there is general agreement that pure price cap regulation of the LECs' interstate common carrier services eliminates their ability to use those services to subsidize OVS services. Under such price cap regulation, prices of regulated common carrier services are determined without reference to costs; annual price changes are constrained by the price cap index (PCI) in each basket and by the band limitations for each service. The PCI and the band limitations are set each year by a formula that depends upon inflation, a productivity offset, and changes in regulatory, tax or accounting rules. Cost changes from investment in a broadband network do not enter the price cap formulas and thus can have no effect on the prices that LECs charge for price-cap-regulated services. LECs cannot compensate for setting OVS prices below cost—or indeed below their contribution-maximizing level—by raising prices of other services.

Second, most LECs have selected the pure price cap option in the (interim) interstate price cap plan and therefore are not currently subject to the sharing mechanism. Throughout the interim plan, losses from OVS services can have no effect on the price cap indices or band limits for any interstate price cap basket, so that LECs cannot compensate for setting OVS prices below incremental cost by raising prices of other services. On the intrastate side, many LECs face freezes or caps on prices of residential basic exchange service. As such, these services cannot possibly serve as a source of subsidy for video services.

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<sup>13</sup> Johnson Declaration at 9.

<sup>14</sup> Price caps apply to common carrier services and therefore will not apply to OVS, OVS NPRM at ¶¶ 5-6.

Third, it is not necessary to break every conceivable link between accounting costs and prices to reduce significantly the ability of a regulated firm to cross-subsidize.<sup>15</sup> This is because cross-subsidization of OVS service is not a profitable or rational business strategy, even if there were a possibility that some portion of the LEC's losses could be offset by smaller price reductions for common carrier services due to sharing. When an LEC sets its OVS prices, it does not know whether its regulated earnings will place it in a position such that additional OVS losses will be partly compensated by higher (or less reduced) prices for telephone services. It would thus be foolhardy to set OVS prices to lose money in the hope that cost misallocation and some effect on the sharing obligation at the end of the year might mitigate the loss.

Even if some of the costs could realistically be expected to be shifted to telephone customers, pricing OVS services below incremental cost would not be a profitable venture. As Areeda and Turner point out, "below-cost" or predatory pricing involves the

... deliberate sacrifice of present revenues for the purpose of driving rivals out of the market and then recouping the losses through higher profits earned in the absence of competition. Thus, predatory pricing would make little economic sense to a potential predator unless he had (1) greater financial staying power than his rivals, and (2) a very substantial prospect that the losses he incurs in the predatory campaign will be exceeded by the profits to be earned after his rivals have been destroyed.<sup>16</sup>

In other words, according to the Areeda-Turner test, predatory pricing consists of not simply pricing below incremental costs but also of being able to recoup profits lost initially and to raise enough long-term barriers to keep rivals out. From this perspective, predatory pricing is particularly unlikely to succeed in a network-based industry. The investments of cable television companies and satellite pay-television suppliers are largely the sunk costs of their

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<sup>15</sup> Computer III Remand Proceedings. Bell Operating Company Safeguards and Tier 1 Local Exchange Company Safeguards, Report and Order, 6 FCC Rcd 7596 (1991) (BOC Safeguards Order).

<sup>16</sup> P. Areeda and D.F. Turner, "Predatory Pricing and Related Practices Under Section 2 of the Sherman Act," *Harvard Law Review*, 88, 1975, at 698.

networks. Even if these competitors were driven from the market by the LEC's subsidized OVS prices, their capacity would remain and be acquired at fire-sale prices by subsequent competitors, so that the LEC would be unable to increase prices at a later time to recoup its losses.

Fourth, although price cap reviews provide regulators with an opportunity to use measured earnings to affect subsequent price cap plans, the link is far more attenuated than Dr. Johnson indicates. Productivity offsets in federal and state plans are almost always set with reference to (i) the industry productivity experience rather than the productivity experience of a single firm, and (ii) total company productivity growth, rather than the productivity growth of a subset of services.<sup>17</sup> In these circumstances, any ability of an LEC to shift costs from one service to another would have no effect on future values of the productivity offset and the future course of its telephone prices under price cap regulation. Moreover, even this link is disappearing. In its price cap review orders, the FCC took steps to reduce further the link between costs and prices: (i) it established a long-term goal of eliminating sharing from the price cap plan entirely, in addition to having already eliminated sharing from one of the LECs' options,<sup>18</sup> and (ii) it concluded that a moving average productivity calculation should be used to reduce the need to monitor productivity growth and change the productivity offset at future reviews.<sup>19</sup>

Fifth, even if continued state or federal regulation did provide some foreseeable—though uncertain—circumstances under which losses from pricing OVS service below cost could—in theory—be mitigated by effects on telephone price changes, such a result flies in the face of regulatory experience. In a joint affidavit concerning out-of-region transport for video services, Dr. Alfred E. Kahn and I observed that

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<sup>17</sup> See, e.g., LEC Price Cap Review Order, 10 FCC Rcd 9008 and 9026 (1995).

<sup>18</sup> Price Cap Performance Review for Local Exchange Carriers, First Report and Order, CC Docket No. 94-1, 10 FCC Rcd 9047 and 9049 (1995). (LEC Price Cap Review Order)

<sup>19</sup> LEC Price Cap Review Order, 10 FCC Rcd 9026 (1995).

even under full-blown, instantaneously effective traditional rate of return regulation, and even if there were some residual joint or common costs between its competitive out-of-region operations and its in-region local exchange services, there would still be no means by which [the LEC] could recover net revenue reductions from the one in prices for the other. The widespread practice of regulatory commissions allocating aggregate revenue requirements among the several categories of service for purposes of regulating their prices is -- whatever else may be said about it -- an effective safeguard against subsidization of competitive operations at the expense of monopoly services. Indeed historically -- and still today -- the preponderant tendency of regulatory commissions has been to allocate common costs in such a way as to cross-subsidize in the opposite direction -- overburdening discretionary and competitive or potentially competitive services in order to hold down the charges for basic monopoly services.<sup>20</sup>

The possibility of cross-subsidization of OVS services by regulated telephone services is extremely remote under current and future regulation of telephone services, and it would be poor public policy to attempt to reduce that possibility further by assigning excessive and inefficient amounts of fixed common costs to OVS services.

Because price cap regulation protects against rates for regulated services being set too high as a result of the LEC's provision of OVS services, the only remaining potential problem is that the regulated firm could charge an inefficiently low—and possibly predatory—price for OVS services. Customers of other services would not pay too much in any sense to compensate the firm for its lost profits. In contrast, a rate-of-return regulated firm that prices a service below incremental cost can, in theory, compensate for its lost profits from the subsidized service by raising prices of other regulated services so that the firm, in total, recovers its costs. For a rate-of-return regulated firm engaged in cross-subsidization, predation

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<sup>20</sup> A.E. Kahn and W.E. Taylor, Affidavit to the U.S. District Court for the District of Columbia on behalf of Bell Atlantic Corporation in *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, (regarding relief from the interLATA restrictions of the MFJ in connection with the then pending merger with Tele-Communications, Inc. and Liberty Media Corporation), filed January 14, 1994. The price structure that results from these cost allocations is not necessarily efficient, and economists are unanimous in their criticism of these methods of setting prices using fully distributed costs.

would be effectively funded by charging a higher price to customers of other regulated services, and earnings of the regulated firm would not—in theory—be reduced by its predatory behavior. Price cap regulation prevents the regulated firm from recovering lost profits from competitive services by setting higher noncompetitive service prices and, therefore, effectively increases the cost of predation, which eliminates any incentive of the regulated firm to price anticompetitively.

**IV. ADDITIONAL COST ALLOCATION SAFEGUARDS ARE UNNECESSARY TO ENSURE THAT OVS SERVICES DO NOT RECEIVE CROSS-SUBSIDIES FROM TELEPHONY SERVICES.**

**A. Compliance with the Part 64 cost allocation requirements eliminates any remaining threat of cross-subsidies**

The existence of the FCC's price cap regulation means that cost allocation is much less important as a deterrent to cross-subsidization than under rate of return regulation. Under price cap regulation, the fact that prices are unaffected by changes in regulated accounting costs means that the difficult problem of allocating fixed common costs to particular interstate services is no longer important for the pricing of common carrier services. The price cap constraints on all interstate common carrier services are unaffected by the addition of OVS service, which is not regulated by price caps. In general, an LEC cannot allocate the fixed common costs of OVS service in a way that will affect the prices that are charged for other services or will permit OVS service to be subsidized.

While price cap regulation effectively removes the ability or incentive to cross-subsidize, Part 64 regulation assures that cross-subsidization is impossible. The FCC has implemented a number of accounting safeguards to prevent cross-subsidization between common carrier and non-common carrier interstate services, including (i) establishing cost allocation rules in the Joint Cost Order, (ii) requiring the filing of cost allocation manuals, (iii)

requiring independent audits of cost allocations, (iv) implementing reporting requirements with automated data storage and analysis, and (v) performing on-site audits by the FCC staff.<sup>21</sup>

Any LEC offering OVS services must comply with current FCC rules, which provide strong ratepayer and competitive safeguards. The FCC currently enforces rules (47 C.F.R. § 64, Subpart I) that allocate costs between common carrier (e.g., basic telephone service) and non-common carrier activities (e.g., OVS services), so that non-common carrier costs are not assigned to common carrier services. Costs of any enhanced or non-common carrier services provided in the new networks are subject to the Part 64 rules which assign costs to common carrier and non-common carrier services as specified in the Cost Allocation Manuals of the LECs. Because these rules first assign costs, to the extent possible, on the basis of cost-causation, the resulting cost assignment assures that at least the incremental costs of each service are assigned to each category of services.<sup>22</sup> Costs which cannot be directly assigned are termed “common costs” which shall be grouped into homogeneous cost categories. Whenever possible, common cost categories are allocated using a direct analysis or an indirect, cost-causative linkage.<sup>23</sup>

(W)hen neither direct nor indirect measures of cost allocation can be found, the cost category shall be allocated based upon a general allocator computed by using the ratio of all expenses directly assigned or attributed to regulated and nonregulated activities. (47 C.F.R. § 64.901 (b)(3)(iii))

Thus, the FCC’s requirements to allocate aggregate accounting costs across categories of services are—whatever else may be said about them—an effective safeguard to prevent the subsidization of competitive services at the expense of non-competitive services. Indeed, the tendency of these rules has been to allocate common costs so as to subsidize in the opposite

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<sup>21</sup> BOC Safeguards Order, 6 FCC Rcd 7591 (1991). (BOC Safeguards Order)

<sup>22</sup> See 47 C.F.R. § 64.901. Such cost assignments may still differ in practice from the economic incremental cost of the service because embedded accounting costs differ from forward-looking economic costs.

<sup>23</sup> See 47 C.F.R. 64.901(b)(3)(i) and (b)(3)(ii).

direction: overallocating costs to non-common carrier services to hold down prices for regulated basic exchange services. The fully-distributed cost allocation mechanisms which are used to assign costs to common carrier and non-common carrier services generally allocate more costs to each category of services than an incremental cost study would assign. Such allocations therefore preclude cross-subsidization because all services are assigned more than their forward-looking incremental costs.

Even more than the FCC, state regulators have historically been reluctant to raise basic telephone rates, partly in order to promote universality of subscription but also for obvious political reasons. Consequently, even if the costs of OVS operations could be misassigned to local exchange services,<sup>24</sup> it is certain that the regulators would resist the price increases indicated by such higher costs. State regulatory commissions have traditionally held the price of basic residential telephone service inefficiently low and have required inefficiently high charges for vertical or enhanced services. Far from permitting cross-subsidization of competitive by monopoly services, state regulators have typically handicapped LECs in the competitive markets; if anything, the flow of subsidy has been in the opposite direction, resulting in inefficient subsidies to local exchange service.

Finally, LECs' common carrier services are under increasing market pressure from new and growing competitors. The new Telecommunications Act not only opens all LEC markets to competition, but also requires LECs to offer their own networks to facilitate competition through resale of existing LEC services and unbundling of LEC facilities. The result is additional pressure on the price of LEC common carrier services and yet another impediment to using those services as a source of subsidy for OVS services.

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<sup>24</sup> The Part 64 rules, however, separate out non-common carrier costs before the Part 36 rules divide common carrier costs between the interstate and intrastate jurisdictions.

**B. The Stand Alone Cost of Telephony Services is not the Economically Correct Cost Ceiling**

To prevent cross-subsidies between telephony and OVS services, Dr. Johnson proposes an incorrect test for the presence of a subsidy to OVS:

the Commission must be able to estimate telephony stand-alone costs and to use those estimates as a ceiling for the assignment of cost to the regulated telecommunications sector. Only in that way can monopoly telephone ratepayers be assured of no higher prices than they would have paid in the absence of OVS.<sup>25</sup>

Furthermore, he recommends the following remedy:

To safeguard against cross-subsidization, procedures must be formulated to ensure that the costs allocated to the regulated sector are no greater than the stand-alone cost of whatever telephone services are to be provided on the common transmission network with OVS. (Johnson Declaration at 11)

These assertions were made by NCTA in its comments during a VDT proceeding<sup>26</sup> and were rejected as a matter of principle by the Common Carrier Bureau in its Dover Order<sup>27</sup> for two valid reasons. First, the FCC recognized the fact that the telephone network is evolving to provide many new services and that not all of the shared costs in excess of stand alone costs of a narrowband telephone network are caused by the decision to supply the broadband service:

because the telephone network is constantly being upgraded, the question is not simply whether or not all costs above the existing costs of telephony should be assigned to video dialtone service. Rather, the issue is how much of the costs are incremental to the cost of providing an expanding array of services over the telephone network. In other words, it is incorrect to view all changes to the

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<sup>25</sup> Johnson Declaration at 12. Johnson (at 3-4) also alleged that LECs video dialtone cost assignments resulted in "a disturbing threat of cross-subsidy."

<sup>26</sup> NCTA, Petition to Reject, or in the Alternative, to Suspend and Investigate Bell Atlantic's Video Dialtone Tariff for the Dover System, February 21, 1995, at 16-17.

<sup>27</sup> Bell Atlantic Telephone Companies Revisions to Tariff F.C.C. No. 10 Rates, Terms, and Regulations for Video Dialtone Service in Dover Township, Transmittal Nos. 741, 786, CC Docket No. 95-145, Order, ("Dover Order"), Released June 9, 1995.



present telephone system as incremental to video dialtone service because a portion of those changes would have been made to the system as part of the normal upgrade, with or without the decision to provide video dialtone. (Dover Order at ¶ 27).

Second, the Dover Order corrects NCTA's (and Dr. Johnson's) accounting which sought to assign to VDT all costs of the broadband network in excess of those they assert to be the forward-looking stand alone costs of a modern narrowband telephone network. As the FCC noted:

[B]ecause video dialtone is not the only new service that may be provided over an upgraded telephone network, it may not be correct to assign all costs that are incremental to telephony to video dialtone service. Thus, the real question is which portions of the network upgrade were due to a decision by the LEC to provide video dialtone (Dover Order at ¶ 27).

Since other services may be provided over the integrated network, Dr. Johnson's claim (at 3-4) that LECs would inappropriately allocate costs in excess of the stand alone cost of telephony to telephone services is pure fantasy. No matter how costs are allocated to OVS, the price that may be charged to telephone subscribers or to users of other services in the future will depend on economic costs and market conditions for those services.<sup>28</sup> More fundamentally, however, how fixed common costs are recovered from services other than OVS services has no bearing on whether or not OVS services are subsidized.

Under the economic theory of cross-subsidization, a service is defined as receiving a subsidy if its incremental costs exceed its incremental revenue, while a service is defined as providing a subsidy if it is priced above its forward-looking stand alone cost.<sup>29</sup> Using these

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<sup>28</sup> Markets for those services have been opened to competition by actions of state regulators and by the Telecommunications Act of 1996. Some of those services will remain subject to pervasive federal and state regulation.

<sup>29</sup> These definitions are well-established in economics, though their usage in regulatory proceedings sometimes varies. See, e.g., W.J. Baumol, "Minimum and Maximum Pricing Principles for Residual Regulation," *Eastern Economic Journal* V(1-2), January/April 1979, at 235-248. W.J. Baumol and G. Sidak, *Toward Competition in Local Telephony*, Cambridge: The MIT Press, (1994) at 55-59. G.R. Faulhaber, "Cross-Subsidization: Pricing in Public Enterprises," *American Economic Review* 65(5), December 1975, at 966-977.

definitions, Dr. Johnson thus conjectures that telephone services in a joint-use network will be priced to provide a subsidy. He does not—and cannot—show that OVS services receive that subsidy. Even if a telephone company does not recover the total economic costs of its joint-use network by charging its proposed rates for OVS and regulatorily-determined just and reasonable prices for other services, the OVS service in question would still not receive a subsidy as long as the incremental revenue from the OVS service exceeded its incremental cost.

Dr. Johnson's assertion that sufficient costs must be allocated to OVS services so that the remaining costs are less than the cost of a stand alone telephone network is incorrect. In competitive, unregulated markets, prices of individual products or services can rise when new technology or tastes change and the mix of new products or services changes. The classic example is provided by A.E. Kahn and W.B. Shew:

Competitive markets have the virtue of offering consumers a variety of price and quality options, but that spectrum of offerings is not unlimited. It is not economically feasible to provide all conceivable packages. For example, there may be some automobile buyers who would prefer to buy cars without bumpers or fenders, at a correspondingly reduced price; but in view of the economies of producing standardized models, it probably would actually be more costly to satisfy their idiosyncratic desires than to supply them with the models preferred by the great majority of customers. In that event, they have no legitimate complaint about not having available to them, at a lower price, a stripped-down version that would have to be custom-made.<sup>30</sup>

Specializing the example to the decision to supply both local and long distance service using a single network, Kahn and Shew observe that

[t]he kind of telephone network that we have, in short, inevitably represents a collective consumption decision. Because it would probably have been impractical for telephone companies to offer two or more systems, of varying capability, it became necessary to decide, in effect, collectively, which quality

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<sup>30</sup> Alfred E. Kahn and William B. Shew, "Current Issues in Telecommunications Regulation: Pricing," *Yale Journal on Regulation*, Vol. 4, Number 2, Spring 1987, at 230-231.

offered the largest differential between benefits and costs to all subscribers together.<sup>31</sup>

In the current example, taking all benefits and costs of narrowband and integrated networks into account, if the integrated network provides the largest difference between benefits and costs for all subscribers taken together, that network should be built and subscribers who use only narrowband services should nonetheless pay at least the incremental cost they impose on the integrated network, even if that price exceeds their current price.

In contrast, Dr. Johnson would effectively place a cost-allocation ceiling on telephone services based on current consumer choice and technology. Such an allocation is not the way prices would be set in unregulated competitive markets, and in regulated markets, pricing by such a rule would be inefficient and would deny customers the benefits of new services. Kahn and Shew demonstrate this fallacy in the context of an LEC that offers various sophisticated services in addition to ordinary voice telephony.

The first question is *whether those investments are economically efficient*, minimizing the combined costs of access, calling, and the newer services; and in this assessment it is necessary to take into account the sufficiency of the incremental net revenues flowing from the services the investments make it possible to offer. If the expenditures are efficient – that is, if they conduce to the efficient design of the entire system – then the marginal costs of the several services at which their prices should be set are their marginal costs under that system. Specifically, if the efficient system entails a higher proportion of NTS subscriber plant costs than some other design, the economically first-best flat rates to POTS customers will reflect those higher costs: The marginal costs of access *are what they are* in the system that is optimally designed to satisfy *all* the demands it serves<sup>32</sup>

In economic theory, the incremental costs that OVS customers should face are the costs caused by their actions in the joint-use broadband network, not the costs allegedly incurred by the LEC's intention to enter the video transport business by constructing a broadband network.

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<sup>31</sup> *Ibid*, at 231.

<sup>32</sup> *Ibid*, at 228, emphasis in original.

Economic costs and efficient prices of telephone services in an integrated network must reflect the causation of cost in that network and not in a hypothetical network designed exclusively for telephone customers.

**V. A SEPARATE SUBSIDIARY TO PROVIDE OVS SERVICES IS AN UNNECESSARY, REDUNDANT AND COSTLY SAFEGUARD.**

The price cap regime and cost allocation procedures discussed in the preceding sections will eliminate any threat of cross-subsidization. Dr. Johnson, however, is not satisfied with those safeguards and proposes to add another mechanism which

would involve placing OVS services within an affiliate separate from the LEC. This separation might be patterned after the separate affiliate safeguards specified in Section 272 of the 1996 Act.<sup>33</sup>

As discussed earlier, competition is superior to regulation, and regulations beyond what is necessary to prevent cross-subsidies are costly in terms of economic efficiency. A nonstructural separation is a superior alternative to a separate subsidiary because it will accomplish the objective of ensuring that competitive services, such as OVS, are not receiving subsidies without incurring the additional costs of establishing a separate entity. A separate subsidiary requirement is especially counterproductive in light of the burdensome price cap and cost allocation safeguards already in place.

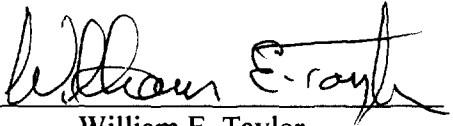
**VI. CONCLUSIONS.**

The concerns raised by Dr. Johnson in this proceeding have no basis in economics. First, his stand alone cost test presumes the firm to be rate-of-return regulated and to supply only two services—telephony and OVS—so that if telephony is priced above its stand alone

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<sup>33</sup> Johnson Declaration at 13.

cost, OVS must necessarily be subsidized. Neither assumption is valid or even useful for determining regulatory policy. By contrast, the FCC's price cap regime effectively protects against cross-subsidization. Second, the FCC's Part 64 requirements provide rigorous safeguards against cross-subsidies by over allocating costs to non-common carrier services, and stand alone cost tests have no bearing on whether a single service is receiving a subsidy. Third, a separate subsidiary is a redundant, potentially inefficient, and costly mechanism to safeguard against cross-subsidies between telephony and OVS services.

  
William E. Taylor

Subscribed and sworn to before me  
this 17th day of April 1996.

  
Notary Public

My Commission Expires                       
MY COMMISSION EXPIRES AUG. 23, 2002  
MY COMMISSION EXPIRES AUG. 23, 2002

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Dr. Taylor received a B.A. *magna cum laude* in Economics from Harvard College, an M.A. in Statistics and a Ph.D. in Economics from the University of California at Berkeley. He has taught economics, statistics, and econometrics at Cornell and the Massachusetts Institute of Technology and was a Research Fellow at the Center for Operations Research and Econometrics at the University of Louvain, Belgium.

At NERA, Dr. Taylor heads the Cambridge office and is Director of the Telecommunications Practice. He has worked primarily in the field of telecommunications economics on problems of state and federal regulatory reform, competition policy, economic issues concerning broadband network architectures, quantitative analyses of state and federal price cap and incentive regulation proposals, and antitrust and contract litigation in telecommunications markets. He has applied the economic theories of price squeezes and cross-subsidization to long distance telephone, Centrex, and public telephone markets. In the area of environmental regulation, Dr. Taylor has worked on statistical issues in the measurement of emissions levels from coal-fired electric power generators and municipal waste-to-energy facilities.

He has published extensively in the areas of telecommunications policy related to access and in theoretical and applied econometrics. His articles have appeared in numerous telecommunications industry publications as well as *Econometrica*, the *American Economic Review*, the *International Economic Review*, the *Journal of Econometrics*, *Econometric Reviews*, the *Antitrust Law Journal*, *The Review of Industrial Organization*, and *The Encyclopedia of Statistical Sciences*. He has served as a referee for these journals (and others) and the National Science Foundation and is currently an Associate Editor of the *Journal of Econometrics*.

**EDUCATION**

UNIVERSITY OF CALIFORNIA, BERKELEY  
Ph.D., Economics, 1974

UNIVERSITY OF CALIFORNIA, BERKELEY  
M.A., Statistics, 1970

HARVARD COLLEGE  
B.A., Economics, 1968  
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## EMPLOYMENT

1988- NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC. (NERA)  
Senior Vice President, Office Head, Telecommunications Practice Director. Dr. Taylor has directed many studies applying economic and statistical reasoning to regulatory, antitrust and competitive issues in telecommunications markets. In the area of environmental regulation, he has studied statistical problems associated with measuring the level and rate of change of emissions.

1983-1988 BELL COMMUNICATIONS RESEARCH, INC. (Bellcore)  
Division Manager, Economic Analysis, formerly Central Services Organization, formerly American Telephone and Telegraph Company. While at Bellcore, Dr. Taylor performed theoretical and quantitative research focusing on problems raised by the implementation of access charges. His work included design and implementation of demand response forecasting for interstate access demand, quantification of potential bypass liability, design of optimal nonlinear price schedules for access charges and theoretical and quantitative analysis of price cap regulation of access charges.

1975-1983 BELL TELEPHONE LABORATORIES  
Member, Technical Staff, Economics Research Center. Performed basic research on theoretical and applied econometrics, focusing on small sample theory, panel data and simultaneous equations systems.

Fall 1977 MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
Visiting Associate Professor, Department of Economics. Taught graduate courses in econometrics.

1974-1975 CENTER FOR OPERATIONS RESEARCH AND ECONOMETRICS  
Université Catholique de Louvain, Belgium.  
Research Associate. Performed post-doctoral research on finite sample econometric theory and on cost function estimation.

1972-1975 CORNELL UNIVERSITY  
Assistant Professor, Department of Economics. (On leave 1974-1975.) Taught graduate and undergraduate courses on econometrics, microeconomic theory and principles.

## MISCELLANEOUS

1985- Journal of Econometrics, North-Holland Publishing Company.  
Associate Editor.

Boards of Directors: National Economic Research Associates, Inc. (1990- ),  
Episcopal Divinity School, Cambridge, Massachusetts (1995- ).



## TESTIMONIES

Florida Public Service Commission (Docket No. 820537-TP) on behalf of Southern Bell Telephone and Telegraph Company: economic analysis of premium intraLATA access charges. Filed July 22, 1983.

Arkansas Public Service Commission (Docket No. 83-042-U) on behalf of Southwestern Bell Telephone Company: economic analysis of non-traffic sensitive cost recovery proposals. Filed October 7, 1985.

Florida Public Service Commission (Docket No. 820400-TP) on behalf of Southern Bell Telephone and Telegraph Company: economic principles underlying a proposed method for calculating marginal costs for private lines services. Filed June 25, 1986.

Federal Communications Commission (Docket No. 87-313) on behalf of Bell Communications Research, Inc.: empirical analysis of the United States Telephone Association proposal for price cap regulation of interstate access service, entitled "The Impact of Federal Price Cap Regulation on Interstate Toll Customers." Filed March 17, 1988.

Florida Public Service Commission (Docket No. 880069-TL) on behalf of Southern Bell Telephone and Telegraph Company: economic incentives for firms under the proposed Florida Rate Stabilization Plan. Filed June 10, 1988.

California Public Utilities Commission (Case 88-04-029) on behalf of Pacific Bell: commission payment practices, cross-subsidization of pay telephones, and compensation payments to competitive pay telephone suppliers. Filed July 11, 1988.

Federal Communications Commission (Docket No. 87-313) on behalf of Bell Communications Research, Inc.: empirical analysis of the price cap plan proposed in the FCC Further Notice of Proposed Rulemaking, entitled "The Impact of the FCC Proposed Price Cap Plan on Interstate Consumers." Filed August 18, 1988.

Federal Communications Commission (Docket No. 87-313) on behalf of Bell Communications Research, Inc.: Rebuttal analysis of intervenor comments on "The Impact of the FCC Proposed Price Cap Plan on Interstate Consumers." Filed November 18, 1988.

New Hampshire Public Service Commission (Docket 89-010)) on behalf of New England Telephone & Telegraph Company: appropriate level and structure of productivity adjustments in a proposed price regulation plan. Filed March 3, 1989.

Federal Communications Commission (Docket No. 87-313) on behalf of Cincinnati Bell Telephone Company, "Incentive Regulation and Estimates of Productivity," (with J. Rohlfs), June 9, 1989.